

Physics
AT QUEENS COLLEGE

Colloquium Notice

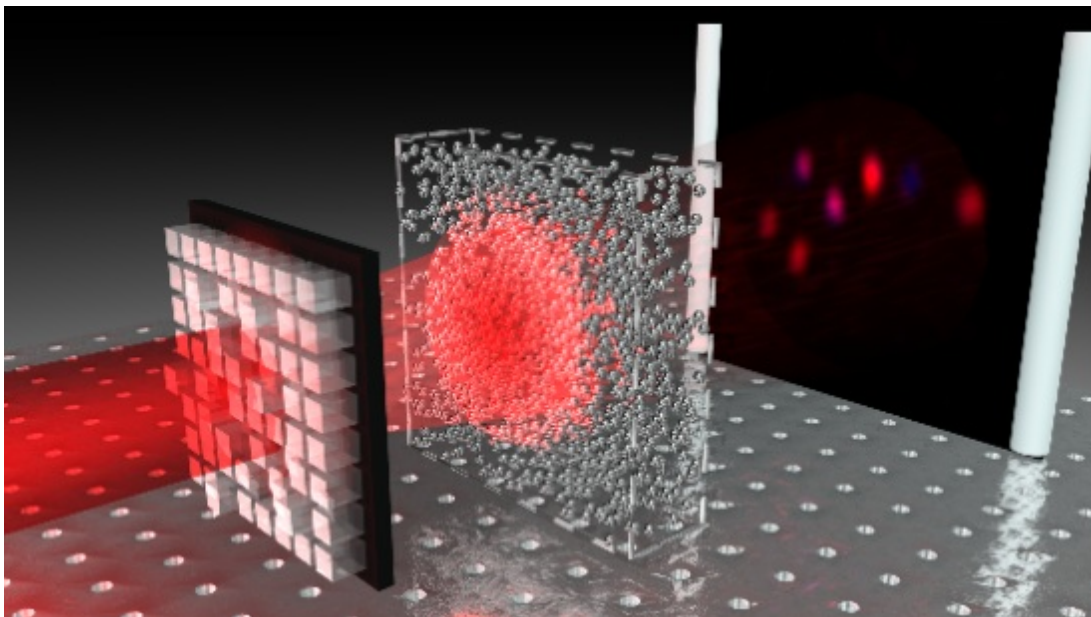
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Shaping light to optimize information

Scattering of light, such as happens in complex and disordered structures, is a phenomenon of basic physical interest and its relation to the information content of light is subtle: Scattering does not destroy, but scrambles information. It has been shown that by shaping the incident light field, scattered light can be focused, used for high-resolution imaging, and fully transmitted through strongly scattering layers.

In this talk, I will discuss shaped light fields that are relevant to precision measurements in scattering environments. Firstly, we present **maximum information states**, which are light states that carry a maximum amount of information about a given observable. These states can be generalised to multiple observables, but can also be combined with information-dark states that are purposefully insensitive to irrelevant or unwanted information.



Monday

March 23, 2026

Starts at 12:15 PM

This talk is accessible via [Zoom](#) or use
meeting ID 829 2687 2594 and **passcode 866995** to join